# Oil & Gas Site Access Roads: Choosing the Best Design

**If you can't get to your site, then you can't add to your bottom line.** That's why it's critical to your operation to construct reliable roads that provide uninterrupted access to the vital parts of your site, no matter the weather or soil conditions. Here are a few common methods for designing site access roads, and what to expect with each one: Example Road = 1 mile

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TriAx®

| | Over-Excavation | Woven Fabric (Geotextile) | Chemical Treatment | BX Geogrid | TriAx Geogrid |
|---|---|---|---|---|---|
| Construction Method | Remove existing soil and replace it with some type of "select fill" | Installing a layer of geotextile and placing a material (usually an aggregate) on top of it. | Chemically modifying the existing soil by adding lime or a similar product | Installing a layer of BX geogrid and placing an aggregate fill material on top of it | Installing a layer of TriAx geogrid and placing an aggregate fill material on top of it. |
| Typical reason this is chosen: | Tried and true method using conventional materials; it will work if dug deep enough and haul-in enough select material | Interest in geosynthetic solution for potential cost savings; Believe performance is equivalent to geogrid | The "norm" or common solution most often utilized | Specifically interested in geogrid solution; Perceived as being lower cost than TriAx Geogrid; Larger distributor footprint | Knowledge of the product and/or its well documented performance and validation; Speficiation by owner/operator |
| Average material costs: | $1.50 yd for 12" + $1.00 SY Agg base 9" **$10.50 SY** | $0.50 SY-in ($3 for 6") + $1.00 SY Agg base 9" **$12.00 SY** | $0.55 SY (non-woven) + $1.00 SY Agg base 9" **$9.55 SY** | $0.80 SY DOT Type 2 + $1.00 SY Agg base 9" **$9.80 SY** | $2.55 SY + $1.00 SY Agg base 6" **$8.50 SY** |
| Is water required? | **No.** The material being excavated usually must be dry | **No.** Also fabric cannot be installed in wet conditions. | **Yes,** always | **No.** It can also be installed in wet conditions and in standing water. | **No.** It can also be installed in wet conditions and in standing water |
| Average pace to build: | **1/8 mile per day** | **1/2 mile per day** | **1 mile per day** | **1 mile per day** | **1 mile per day** |
| Anticipated annual maintenance costs: | Pothole repair and re-grading: **$8,000 annually** | Pothole repair and re-grading: **$8,000 annually** | Pothole repair and re-grading: **$8,000 annually** | Pothole repair and re-grading: **$3,000 annually** | Pothole repair and re-grading: **$1,000 annually** |
| Anticipated Design Life: | **2 - 3 years** | **2 - 3 years** | **2 - 3 years** | **3 - 5 years** | **8+ years** |
| Conclusions: | Expensive initial costs although proven to work; Expensive to maintain long-term | The "go to" solution is also the most expensive initially and expensive to maintain | Less expensive and faster to build than non-geosynthetic options but still just as expensive to maintain | Product is less expensive and fast to build but additional aggregate requirements make it as expensive as fabric; Longterm maintenance costs are less than fabric | **Total installed cost makes it the cheapest option; It's fast to build and it drastically reduces maintenance costs for the greatest longterm savings** |

## WHATEVER YOUR PROJECT, WE CAN HELP

Tensar International is a manufacturer of proven geosynthetic products and full provider of engineering services. Backed by extensive research and thoroughly tested, Tensar's world-renowned geogrid products have set the industry standard. We help engineers, contractors and owners use geogrid to achieve more cost-effective, reliable solutions for soil stabilization, earth reinforcement, and other site development challenges.

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